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PATENT  
1152-0310PUS1

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Michiyuki SUGINO Conf.: 9017

Appl. No.: 10/510,564 Group: 2871

Filed: October 8, 2004 Examiner: UNASSIGNED

For: LIQUID CRYSTAL DISPLAY

L E T T E R

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 20, 2005

Sir:

Subsequent to the filing of the above-identified application on October 8, 2004, attached hereto is an English translation of the International Preliminary Examination Report (Form PCT/IPEA/409) that should be made of record in the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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TCB/slb  
1152-0310PUS1

Attachment(s)

From the INTERNATIONAL BUREAU

**PCT**

**NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**  
(PCT Rule 72.2)

Date of mailing (*day/month/year*)  
23 December 2004 (23.12.2004)

To:

FUJIMOTO, Eisuke  
c/o Fujimoto Patent & Law Office  
Room 317, Sanno Grand Building 3F,  
14-2, Nagata-cho 2-chome  
Chiyoda-ku, Tokyo 100-0014  
JAPON

**IMPORTANT NOTIFICATION**

Applicant's or agent's file reference

FWA3-06

International application No.  
PCT/JP2003/006129International filing date (*day/month/year*)  
16 May 2003 (16.05.2003)

Applicant

SHARP KABUSHIKI KAISHA et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

AZ, CA, CH, CN, CO, EP, GH, KG, KP, KR, MK, MZ, RO, RU, TM

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, BA, BB, BG, BR, BY, BZ, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, ES, FI, GB, GD, GE, GM, HR, HU, ID, IL, IN, IS, JP, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PH, PL, PT, SC, SD, SE, SG, SK, SL, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yoshiko Kuwahara

Facsimile No.+41 22 740 14 35

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## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FWA3-06	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/006129	International filing date ( <i>day/month/year</i> ) 16 May 2003 (16.05.2003)	Priority date ( <i>day/month/year</i> ) 17 May 2002 (17.05.2002)
International Patent Classification (IPC) or national classification and IPC G09G 3/36, G02F 1/133		
Applicant <b>SHARP KABUSHIKI KAISHA</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 28 October 2003 (28.10.2003)	Date of completion of this report 15 April 2004 (15.04.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/006129

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

the international application as originally filed  
 the description:

pages \_\_\_\_\_ 1-3, 6-15 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ 4-5 \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the claims:

pages \_\_\_\_\_ 3, 6 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, as amended (together with any statement under Article 19)  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ 2, 4-5 \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the drawings:

pages \_\_\_\_\_ 1-2, 4-10 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ 3 \_\_\_\_\_, filed with the letter of \_\_\_\_\_  
 the sequence listing part of the description:  
 pages \_\_\_\_\_ \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
 These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_ 1 \_\_\_\_\_  
 the drawings, sheets/fig \_\_\_\_\_

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP03/06129

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	2-6	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	2-6	NO
Industrial applicability (IA)	Claims	2-6	YES
	Claims		NO

## 2. Citations and explanations

Document 1: JP, 64-10299, A (Mitsubishi Electric Corp.), 13 January, 1989 (13.01.89), page 2, upper right column, line 7 to page 4, upper left column, line 10, Figs. 1-6 (Family: none)

Document 2: JP, 4-318516, A (Casio Computer Co., Ltd.), 10 November, 1992 (10.11.92), paragraphs [0010]-[0019], Figs. 1 and 2 (Family: none)

Document 3: JP, 4-288589, A (Toshiba Corp.), 13 October, 1992, paragraphs [0018]-[0020], Figs. 1 and 2 (Family: none)

Document 4: JP, 7-20828, A (Toshiba Corp.), 24 January, 1995, paragraphs [0014]-[0017], Figs. 5 and 6, & US, 5528257, A

## Claims 2-4

The invention shown in document 1 does not clearly describe how the state of liquid crystals in a frame following the current one is predicted; however, in view of the common technical knowledge, it would be technically obvious that it is determined according to the combination of gradation transitions before and after one vertical display period because it could not be predicted according to other combinations. Document 1 does not clearly describe a means of the prediction; however, for the constitutions to obtain the desired output value by using the combination of gradation transitions before and after one vertical display period, a constitution wherein table memory is searched or a constitution wherein a function is used is well known, e.g., as shown in documents 2-4. Accordingly, there would be no particular difficulty in adopting a well-known constitution as mentioned above to obtain predicted values of gradation transitions in the invention described in document 1, and so conceiving of the constitution of the subject matters of the above claims. The subject matters of the above claims therefore do not appear to involve an inventive step.

## Claims 5 and 6

It is well-known common technical knowledge, for example, as shown in document 2, that the response characteristics of liquid crystals are dependent on temperature. In the relevant technical field, the technical issues involved in improving the display quality are well known. Accordingly, there would be no particular difficulty involved in conceiving of a constitution wherein corrections are made with the temperature-dependence of liquid crystals taken into consideration to improve the display quality in the invention described in document 1. It would be technically obvious that such temperature dependence should be taken into consideration in the constitution to obtain predicted values and output values in the invention described in document 1.